

ABSTRACT

To improve energy use efficiency of an engine.

An oil cooler 16a for cooling hydraulic oil that has increased in temperature due to energy loss in a hydraulic circuit 25, a radiator 16b for cooling engine cooling water that has increased in temperature as a result of cooling an engine 11, and an ATAAC 16c for cooling engine intake air that has increased in temperature as a result of being compressed by a turbocharger, are provided with heat pipes 41a, 41b, 41c for vaporizing low-boiling medium by absorbing heat from the oil cooler 16a, the radiator 16b, and the ATAAC 16c. A power recovery turbine 24 adapted to be rotated by means of energy provided by vaporized low-boiling medium is provided for the engine 11. A low-boiling medium circuit 38 is provided so as to drive the turbine 24 by feeding the low-boiling medium that has been vaporized by waste heat energy. The low-boiling medium circuit 38 includes the heat pipes 41a, 41b, 41c of the oil cooler 16a, the radiator 16b, and the ATAAC 16c, as well as the turbine 24.